



# **Caterpillar Biodiversity of the American Southwest**

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# Family Sphingidae

- \* large, cylindrical body
- \* setae inconspicuous except above prolegs
- \* horn on dorsum on A9 or horn base replaced by button
- \* body segments annulated with 6-8 shallow creases
- \* anal prolegs laterally flattened





*Proserpinus vega*. Host: Gaura



*Sphinx dollii*. Host: Juniper



# Family Saturniidae

- \* large, cylindrical body
- \* secondary setae esp. above prolegs
- \* primary setae often arise from hardened plates or are modified as knobs, horns, or branched spines
- \* anal plate is frequently spinose or heavily armored
- \* outer face of the anal prolegs often bears a hardened triangular plate





*Eupackardia calleta*

Host: Ocotillo (*Fouquieria splendens*)

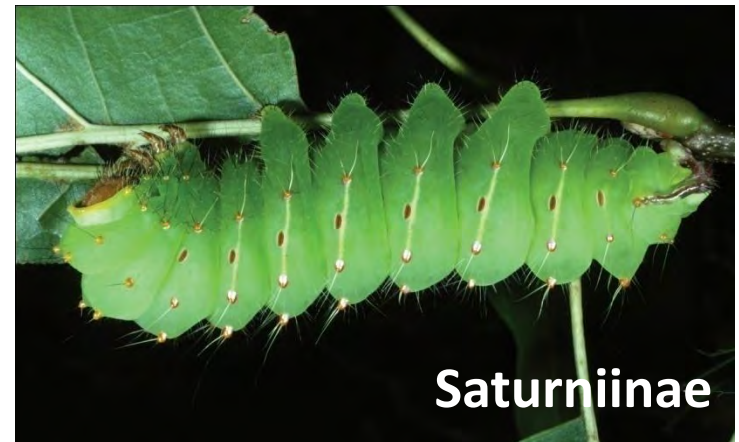
*Sphingicampa raspa*

Host: Prairie acacia (*Acacia angustissima*)



# Saturniid Subfamilies

- \* Ceratocampinae possess elongate, black, spinose horns on T2 and comparatively thick integument (skin) the buck and day moths
- \* Hemileucinae are profusely armed with many-branched, poison-filled, stinging spines
- \* Saturniinae difficult to characterize-many saturniines have the head partial drawn into the thorax.



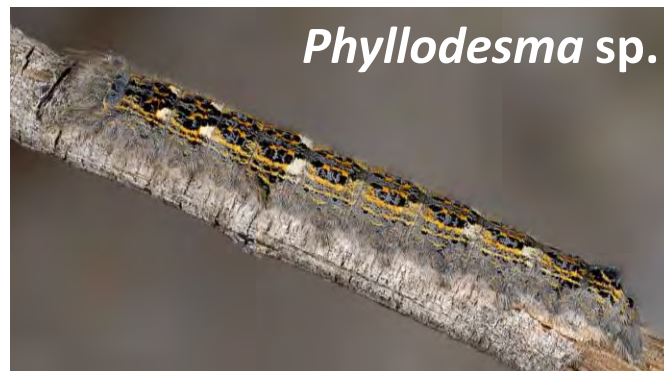
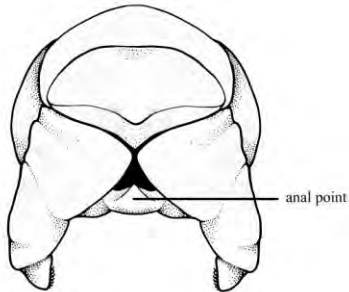
# Family Apatelodidae

- \* head bears numerous short secondary (extra) setae
- \* densely vested in silky setae and comparatively long prolegs
- \* prolegs often red
- \* no anal point between anal prolegs
- \* crochets, of two lengths



# Family Lasiocampidae

- \* long, thin, silky setae, most numerous about the sides of the body and head
- \* setae usually not clustered into conspicuous tussocks and lashes
- \* setae never barbed or plumed
- \* flattened with fleshy lateral lappets
- \* anal point between anal prolegs
- \* some urticating





*Apotolype brevicristata*. Host: mesquite

# Family Notodontidae

- \* body is stout with a proportionately large head
- \* anal prolegs are modified, being noticeably larger or smaller than those of the mid-abdominal segments
- \* often with secondary setae above the bases of abdominal prolegs
- \* two SV setae on prothorax





*Praeschausia zapata*. Host: *Euphorbia*



*Cargida pyrrha*

Host: Lotebush (*Ziziphus*)



*Dasylophia seriata*

Host: tick trefoil (*Desmodium*)



Pink-dotted Oakworm  
*Scevesia angustiora*  
Host: oak (*Quercus*)



*Heterocampa amanda*

Host: emory oak (*Quercus emoryi*)

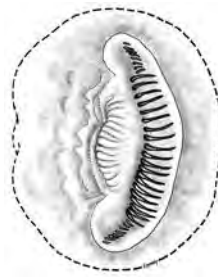


*Oligocentria "pallida"*

Host: Arizona sycamore (*Platanus wrightii*)

# Family Arctiinae (Erebidae)

- \* densely covered with setae
- \* setae minutely barbed or plumose
- \* often warningly colored in some combination of black, white, red, orange, or yellow
- \* crochets, shortened at ends
- \* thoracic claws may possess subtending spatulate setae



*Euchaetes antica*

Host: milkweed (*Asclepias*) and  
rock trumpet (*Macrosiphonia*)





*Inopsis modulata*

Host: lichens

# Family Noctuidae + Erebidae + Euteliidae + Nolidae (Noctuidae of previous authors)

- \* no larval characters were identified by Kitching and Rawlins (1999) as being unique to the superfamily
- \* many smooth and stocky with rounded shiny heads and short, inconspicuous setae
- \* prolegs are usually present on A3-A6, but those on A3 and A4 are frequently absent or reduced
- \* A10 prolegs are generally unmodified
- \* crochets are arranged in a linear to slightly arching series more or less parallel to the body axis



*Acronicta funeralis*



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*Cucullia styx*



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*Cucullia dorsalis*



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*Cucullia laetifica*



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*Cucullia lethe*



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*Cucullia alfarata*



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*Cucullia alfarata*



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*Cucullia eccissica*



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*Cucullia eccissica*



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*Dolocucullia minor*



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*Dolocucullia minor*



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*Cucullia intermedia*



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*Cucullia intermedia*



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*Cucullia umbratica*



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*Cucullia umbratica*

# 3 of 24 Arizona *Cucullia* (Noctuidae: Cucullinae)



*Cucullia lilacina*



*Cucullia dorsalis*  
Host: *Aster* and kin



*Cucullia oribac*  
Host: *Baccharis*



**Harlequined Paint** (*Cucullia dorsalis*). Host: *Machaeranthera gracilis*



**Camphorweed Paint** (*Cucullia laetifca*). Host: *Heterotheca subaxillaris*

# Magnificent Paint ( *Cucullia lilacina* ).

Host: *Erigeron*



*Cucullia* species?

Host: *Gutierrezia sarothrae*





*Stiria rugifrons*  
Host: sunflower (*Helianthus*)

*Plagiomimicus?*

Host: ragweed flowers (*Ambrosia*)





*Stiria* species unknown  
Host: *Heliomeris longifolia*

# *Stiria sulphurea*?



Photos: Jennifer Bundy  
Host: *Viguiera dentata*

*Schinia gaurae* on gaura (inflorescences)





*Ponometia venustula* on sida

*Tarache idella* on hairy Indian mallow (*Abutilon*)



*Tarache lucasi* species on rock hibiscus (*Hibiscus denudatus*)



Photo: Jillian Cowles

# Family Geometridae

- \* elongate, somewhat cylindrical caterpillars
- \* *prolegs on A3, A4, and A5 nearly always missing*
- \* secondary esp. above prolegs; sometimes with rudimentary prolegs on A5
- \* larvae loop when they move
- \* anterior abdominal segments elongate
- \* warts and knobs can be extremely helpful in identification





*Drepanulatrix?* Host: ceanothus

*Synchlora frondaria*  
Host: *Ericameria*

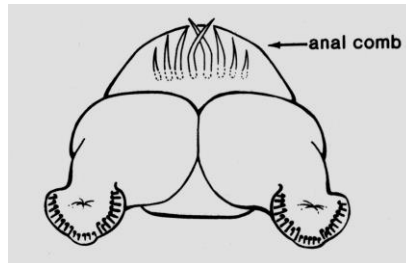




*Ceratonyx permagnaria*  
Host: *Quercus*

# Family Hesperiidae

- \* often with narrow neck and enlarged head
- \* body spindle-shaped, usually thickest in midabdominal segments, strongly tapered rearward
- \* profuse, short, fine, secondary setae (visible with lens)
- \* anal comb (toothed, fan-shaped plate above anus) that facilitates ejection of excreta.
- \* crochets of two or three lengths arranged in circle.



# Family Papilionidae

- \* stocky caterpillars broadest near juncture of thorax and abdomen
- \* eversible forked gland behind head (osmeterium)
- \* body with minute fine hairs (visible with lens)
- \* larval crochets, of three (rarely two) lengths arranged in row paralleling body axis; there may be second smaller set of reduced crochets closer to midline



# Family Pieridae

- \* elongate, roughly cylindrical, usually green (or yellow) and often non-descript
- \* abundant short setae vest body and head (often arising from minute, raised plates)
- \* primary setae often glandular in early instars
- \* body segments often annulated—commonly, five shallow creases ring each midabdominal segment





*Phoebis sennae*  
Host: senna



*Anthocaris cethura*. Host: fringedpod (*Thysanocarpus*)

# Family Lycaenidae (and Riodinidae)

- \* body short, wide, and somewhat flattened
- \* head small, retracted into thorax
- \* body densely covered with short setae in blues, coppers, hairstreaks, and long silky setae in our riodinids.
- \* in blues, minute star-shaped setae cover thorax and abdomen
- \* in metalmarks spiracle on A1 below level of others
- \* coloration sometimes variable within species, especially among flower- and fruit-feeding hairstreaks and blues.





***Strymon melinus***  
Host: bastardsage  
(*Eriogonum wrightii*)

# Family Nymphalidae

- \* caterpillars surpass all other butterfly families in diversity of form
- \* secondary setae, although often tiny and visible only with lens, most obvious above prolegs
- \* head often enlarged several subfamilies with branched spines
- \* one universal character may be presence of minute filiform seta near base of scoli on A9 (Harvey 1991)
- \* never with middorsal scoli on A9
- \* crochets of one, two or, most commonly, three lengths, arranged in series that parallels body axis.





*Adelpha eulalia*  
Host: oak

# Family Limacodidae

- \* prolegs replaced by medial suckers on the first seven abdominal segments
- \* rather than walk, the larvae glide
- \* head deeply retracted into thorax
- \* no anal point between anal prolegs
- \* Even while feeding, the head is covered by a fleshy extension of the first thoracic segment
- \* feculae with cavity on one side



*Parasa chloris*



*Euclea dolliana*



*Prolimacodes trigona*



*Euclea dolliana*  
Host: oak and other  
smooth-leaved woody plants

# Family Megalopygidae

- \* accessory prolegs on abdominal segments A2 and A7 (in addition to normal complement on A3-A7)
- \* accessory legs lack crochets
- \* head retracted into thorax
- \* rows of setal tufts (subdorsal, supraspiracular, and subspiracular) bear mixtures of stinging and longer hairlike setae.
- \* caution: strongly urticating spines
- \* fleshy lateral lobe posterior to spiracle
- \* feculae with cavity on one side



*Megalopyge bissexa* ultimate



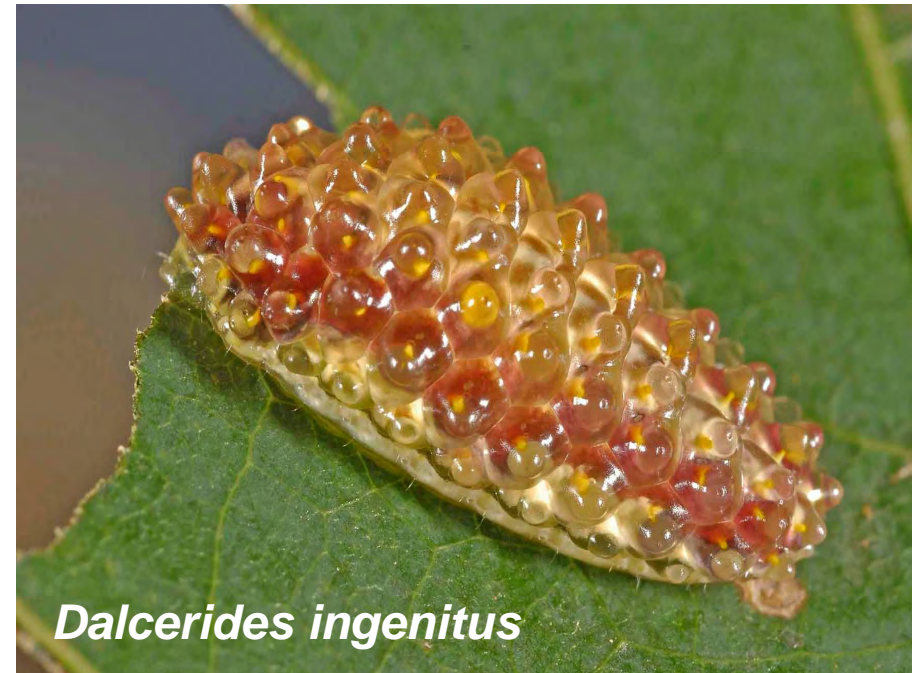
*Megalopyge bissexa* penultimate



*Norape tenera*

# Family Dalceridae

- \* covered in gelatinous warts
- \* cuticle brightly colored (beneath gelatinous warts)
- \* extra prolegs on A2 and A7, and these with crochets (cf. Megalopygidae)
- \* “medial frass-flicking setae”





*Dalcerides ingenuus*

Host: oak and manzanita (*Arctostaphylos*)